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THE WATER-WAYS OF NEW YORK.

BY DR. ISAAC I. HAYES.

Within the valley of the Mississippi dwell about thirty millions of people. Those of the two rivers which drain China, united, amount to 1,200,000 square miles, and contain a population of four hundred millions of human beings. The valley of the Danube, which has been the granary of Europe for centuries, embraces an area of 234,000 square miles. Next to these we have the valley of the Volga, which—not the Volga itself, but the branches that run parallel with it and discharge into the Caspian sea and the Sea of Aral—embraces an area of 363,000 square miles. This, in ancient times, was the seat of the most prosperous commerce, or the scene of the most prosperous commerce, that the world has known until the present time. We have then that vast population of India, drained to the ocean through the Ganges and the Indus rivers ; the Ganges, teeming with an ancient and at one time highly civilized population, drains an area of 420,000 square miles, and the Indus a little less than 400,000 square miles. The largest drainage in the world is that of the Amazon, which is not less than 1,527,000 square miles. Yet the valley of the Amazon yields subsistence to a very small population, only a little of which is civilized.

I mention these simple facts in order that I may indulge my fancy a little in calling your attention to those great centres of industry and civilization that have marked the history of the world.

The Alleghany range of mountains stretches parallel with the coast, having an average altitude of 2,500 feet, and is broken through only in one place, and that place is in the State of New York. The highest elevation in this breakage of the range is only 427 feet above tide-water, and that is the valley of the Mohawk river, a branch of the Hudson. The vast and fertile country lying beyond the Alleghany mountains early attracted the attention of the fathers of our country, and even in colonial times Washington recommended the Government of Virginia to appropriate the money necessary to connect the eastern slope of the Alleghanies with that vast and

unknown region beyond by canal—water communication being, at that time, the only communication known, except by horses, by mules, by carts, and similar mechanical contrivance on land. The project was subsequently supported by Jefferson, about the same time that Louisiana was obtained from the French Government for about fifteen millions of dollars, the most happy circumstance that ever occurred in the history of this country, for it gave us 6,400 square miles of territory, to say nothing of the Rocky Mountains, and the slope westward to the Pacific Ocean. Canals were undertaken grudgingly, at first, and the base of the Alleghanies was reached, but the most of the territory was beyond the limit of water communication, and only to be reached by wagons. The need of communication was advocated in Pennsylvania by Franklin, and other men conspicuous in the history of that great and prosperous State ; but at no time was successful communication made with the West until the time of De Witt Clinton—a great man—and we may say that to him New York, as a commercial and prosperous State, owes its existence. He was the private secretary in 1794 of the first Governor of the State, who was his uncle, George Clinton, and his attention at that time, while a young man of nineteen, was attracted to the importance of connecting the East with the West, and from that time on he urged the necessity of communication between the two great sections of the country, and, at the same time, recognizing the break that gave to New York its position, he pointed out the fact that through the break communication was possible. Canals at that time were going forward in England and on the Continent at a great rate, but De Witt Clinton projected a system rivaled only by those of Holland and China. He had the satisfaction of passing over the range in 1810, traveling from Syracuse to Utica by the Mohawk river. Schenectady was then only a straggling little town with fifteen houses and three stores—a city now of large population and extensive manufactures. Utica consisted of fifty houses, three grog shops, five stores and one hotel—a city now of fifty thousand inhabitants and prosperous as a manufacturing town. Rochester and other towns were only small hamlets in that year—1810. De Witt Clinton finally became Governor of the State, and in 1823, after a life spent with this one object of creating a canal system for the

State, he had the satisfaction of seeing formally opened by the State a route connecting the headwaters of the Hudson river at Albany—or Troy—with the waters of the Lakes. And I hold in my hand here—something which you all cannot very well see—one of the original placards posted from town to town along the line of the canal, announcing its opening. The telegraphic signal was the firing of a battery, which sound was taken up from town to town, from village to village, from city to city along the entire line, when Governor Clinton was making his way in the first boat that passed from Lake Erie to the Hudson. I fancy this is almost the only poster of that kind in existence, and is of such interest that I give it entire.

CELEBRATION

Of the Passage of the first Boat from the Grand Canal into the Hudson, at the City of Albany, on Wednesday, October 8, 1823.

ORDER OF ARRANGEMENTS.

1. A National Salute to be fired at sunrise, and the bells to ring. At which time the joint committee will proceed to the junction of the Erie and Champlain Canals, and there join the Canal Commissioners and Engineers on board a Canal Boat; from thence down the canal. On their arrival at the Basin at Gibbonsville, they will be received by another Boat, with the Military Association and a Band of Music on board. The two boats with such others as may join them, will then move on to the city of Albany, where they will arrive at 11 o'clock.
2. The different vessels in the harbor to be dressed with flags, and moored in a line in front of the Basin.
3. A Band of Music to be stationed opposite the Lock.
4. The Artillery, with field pieces, to be stationed on the Pier in front of the Lock.
5. A detachment of Artillery, with heavy field pieces, to be stationed on the high ground west of the Lock.
6. The State and Municipal Authorities, Military, Societies and Citizens will assemble at the Mansion-Houses at 9 o'clock, A. M., and will be escorted to the lower Lock by the Military.
7. At 11 o'clock the Top Stone of the Lock at the termination of the Erie and Champlain Canals, will be laid by the Grand Chapter of the State of New-York, according to masonic rule.
8. When the first boat passes into the Hudson, salutes to be fired by the Artillery on the pier and high ground, during which National Airs to be played by the Band, &c. and the boat will be taken in

tow by twelve Yawls, each manned by a Captain and six oarsmen, and proceed down the Basin into the river, and thence round to the head of the Pier.

9. After the landing of the Canal Commissioners and other gentlemen from the Boats, a procession will be formed in the following order—

MILITARY, under the command of Major-General Solomon Van Rensselaer, Marshal, assisted by Major R. I. Knowlson and Capt. John Koon, in such order as the Marshal shall designate in General Orders.

Sheriff and City Marshal.

Common Council and Committee of Arrangements.

CANAL COMMISSIONERS.

Engineers and Assistant Engineers.

Commissioners of the Albany Basin.

Canal and Basin Contractors.

Rev. Clergy.

The Governor and Suit, Lieutenant-Governor, Chancellor and Judges of the Supreme, Circuit and United States Courts.

Senate and Officers.

The Heads of Departments.

Members of Congress and Civil Authorities of the United States.

Officers of the United States Army and Navy.

BAND.

Military Association.

Fire Department, including Engine, Hook and Ladder, and Axe Companies.

SOCIETIES.

Cincinnati.

Grand Chapter of Royal Arch Masons.

Society for the promotion of Useful Arts.

Albany Lyceum.

St. Andrew's Society.

St. Patrick's Society.

Mechanics' Society.

Cordwainers' Society.

CITIZENS and STRANGERS.

10. A signal gun will be fired by the Artillery on the Pier, when the procession will move under discharges of Artillery, through North Ferry, Market and State-streets, to the Capitol Square. The bells will ring during the moving of the procession.

Ceremonies to be performed in a Pavillion at the Capitol Square.

11. An address to the Throne of Grace by the Rev. Dr. Chester.

12. His Honor the Mayor, in behalf of the Common Council and the Citizens of Albany, will deliver an Address to the Canal Commissioners, on the successful completion of Canal Navigation to the city of Albany.

13. National Air by the Band.
14. Benediction by the Rev. Mr. Leonard.
15. A Feu-de-joie by the Military.
16. Fire Works to be exhibited in front of the Capitol in the evening, to commence at 7 o'clock.

CHARLES E. DUDLEY,
ESTES HOWE,
JAMES GIBBONS,
EBENEZER BALDWIN,
FRIEND HUMPHREY,
JOHN CASSIDY,
COENRAD A. TEN EYCK,
HAWTHORN M'CULLOCH,
HENRY W. SNYDER,

Committee of Common Council.

WILLIAM JAMES,
JOHN STILWELL,
JAMES B. DOUGLASS,
SAMUEL A. FOOT,
JOHN N. QUACKENBUSH,
PETER GANSEVOORT,
ISRAEL SMITH,
JOSEPH RUSSELL,
SOL. VAN RENSSELAER,

Committee of Citizens.

I mention these facts, trite as they may be, for the purpose of calling your attention to the life of our Empire State; and what I mean by this is, that the State of New York has the Erie canal, and the Erie canal has made the State what it is.

"The Water-ways of the State of New York in their Relation to its Commerce" is the title of the address which I am to deliver this evening. Now, the watershed of which I have been speaking includes the whole of the State of New York, except the small portion of it lying on the western slope of the Alleghany mountains. Pennsylvania lies largely within it and contains great mineral wealth—iron and coal, and more lately have been discovered large quantities of petroleum, creating a new industry that from Pennsylvania has spread out over the earth, and is one of the large items of export that make up our credits to the commercial centres of Europe and all other parts of the civilized world. The harbor of New York is perhaps more beautiful than any other in existence. In it all the navies of the world might lie at anchor at the same time and not be crowded. Passing by that, the traveler from Europe comes to this Island of Manhattan. The Dutch, in passing here, had carried on some barter with the natives, and, before leaving, filled their calabashes with gin which produced such remarkable effects that the Indians named the locality *Man-hat-tan*, which

simply means "the place of drunkenness." Such is the Indian name. I mean no imputation or reflection whatever. Passing up the river, we come to historic places like Dobb's Ferry and Verplanck's Point, and at Tarrytown you may take a glimpse into the revolutionary history and see the spot where one was taken who held within the hollow of his foot records that would have sold the country to the enemy—I allude, of course, to the capture of André. Passing on from this you come to Sunny Side, and you may, perhaps, get a glimpse into the little place where lived Washington Irving, whose magic pen pictured the region round about, telling us the legends of the Catskills and of Rip Van Winkle. Passing on we see those kings of the Hudson, the Donderberg and old Cro' Nest. Going further up to our right are the Berkshire Hills of Massachusetts, and far away the remote peaks of the range we know as the White mountains, and so on until they run right into the valley of the St. Lawrence. Turning our faces now to the south, there is to the west the Alleghanies—or Appalachian range, to speak more definitely—of which nearest to us is the branch called the Catskills, the most romantic mountains in the world as you see them dyed purple by the setting sun. North of them is the Helderberg group. In New Jersey the Appalachian range is known as the Blue mountains; further to the south as the Cumberland, the Blue Ridge and Black mountains; and finally the range dies away in the blazing slopes of Georgia and Alabama.

I have tried to picture this range of mountains, because in one place, and one only, and that is by the valley of the Hudson, at Albany, and through the Mohawk river, you have the only break that occurs between the St. Lawrence and the savannas of Georgia and Alabama. It was the genius of De Witt Clinton that first conceived the idea of availing himself of the opportunity to drain the waters of the great lakes into the Hudson river. At the time of this conception of De Witt Clinton, New York was less in value than Virginia or Pennsylvania. If I can light here upon the figures I will give them to you, as to the relative value or proportionate value of these three several States.

At that time the population of Virginia was the largest of any State in the Union, that is to say, 880,200; the second State in importance was Pennsylvania, with a population of 602,365 and the

third was New York, with a population of 589,051. This was the condition of New York at the beginning of the present century. In 1875, when our last census was taken, New York had a population of 4,705,208, a gain of 702 per cent. within the century. At the same time, the population of Virginia, including West Virginia, had grown to 1,607,177, being a gain of 90 per cent. only in the century, as against New York's 702 per cent. We might call these results of masterly inactivity on the part of Virginia and of activity on the part of New York; but I claim that the marvellous prosperity of the State of New York is due simply to the circumstance that the Erie canal was opened through the State, where the valley of the Mohawk is only 427 feet above the level of tide-water, due entirely to the fact that De Witt Clinton, recognizing the importance of draining the products of the Western country into the Hudson and thence to the seaboard, created the possibilities of our State through artificial means. New York, therefore, is an artificial State, made by artificial methods, and owes her existence solely and simply to the fact that she fills the only gap in the Alleghany mountains. The products of the State of New York could not to-day feed one-fourth of her population. I will not tire you by detailing the products of the State, as I have the figures before me in the census of 1875, but I will state one fact: The amount of grain produced by the State—which was at one time the best wheat-producing State in the country—in 1875 was less than 10,000,000 of bushels and would not sustain one-fourth of the population of the State. That is to say, the entire product of the State, in the way of grain, would not feed Manhattan Island. The State, therefore, owes its prosperity to its transportation. Its transportation began with the opening of the water-ways—that is to say, of the Erie canal and the Champlain canal. The former was originally intended more to connect growing centres of traffic and of manufacture, such as were Syracuse and Rome and Rochester, than with any idea of a more ultimate advantage to grow out of what might come. People settled by its banks, and with marvellous rapidity, such as nowhere else has been known. Little Falls, Schenectady, Rome and Rochester grew into important towns or cities, and when railroads were invented by the genius of Stevenson, in England, and were consummated in this country, little branch railroads were built to connect the

towns or cities which the Erie canal had created. New towns sprung up, and by and by there was a through line of railroads between the Lakes and Albany and along the Hudson river from Albany to New York, and the consolidated great road which connects these great cities to-day was created by the water-ways which had created the cities.

You have all heard the story of the boy who asked his father how it was that every great city had a river running past it. The truth is that all the commerce of the world, that exists now or has ever existed, has been transient when carried on by artificial means, and permanent if by water transportation, which point I propose further to illustrate. The water-ways of the world are the permanent highways of its commerce. Overland transportation of products, by whatever means conducted, is temporary, fleeting, and purely to serve the purposes of the time. The water-way means everywhere commerce, and the commerce of New York is the Erie canal. The Erie canal made it the fashion of this great western country to come to New York. The railroads, when they had been built, using the opportunity, came by parallel lines and profited thereby. The New York Central and the Hudson river roads were supplementary to the canal, and if the Erie canal were wiped out of existence to-day, the Hudson River Railroad would not pay dividends upon its bonds, for the simple reason that the longest way for the products of the great West to reach the seaboard is by the way of the New York Central road. It is seventy-one miles nearer by the Pennsylvania to Chicago than by the New York Central or the Erie. These roads, then, are simply conveniences of commerce—adjuncts to the water-ways of commerce.

There are three stages in the history of this canal which we owe to the genius of De Witt Clinton. The first embraces the period following the completion of the canal, when it was only four and a half feet deep, forty feet in width, and intended to carry only vessels of seventy-five tons burthen. The second period began in 1835, when it was widened to seventy feet, and deepened to seven and a half to nine feet, but the least depth was seven and a half feet. This was not completed until 1862, and then the boats, from being an average tonnage of seventy-six tons, reached a maximum of three hundred tons and an average of two hundred and twenty tons.

The traffic kept pace in growth with the improvements, and the line of communication through the State being made the fashion by the canal, the latter gave its surplus to the railroads, and they prospered. Now, the third stage of that canal has recently occurred, and the fourth will occur within a short time. The Constitution of the State of New York requires that the water-ways of the State mentioned in the Third Section of the Seventh Article of the Constitution—mentioning particularly the several canals, that they cannot be legislated out of existence—requires that the expenditures for canal purposes in any one year shall not exceed the receipts of the previous year, and they are known, therefore, as the Constitutional canals. The receipts are from the tolls levied upon the grain and other produce that passes over the line. This has been found by the managers of the canals to be a serious incubus upon their prosperity. They are limited in their expenditures, not only for the necessary repairs but for any breakage that may occur in the canals. There is a little which the Constitution provides for. Now, I have had a little experience during the past six years in legislative matters, having for that length of time been sent from the district in which this hall is placed as the representative of the richest commercial body of any in the State, and foreseeing the difficulties, and having given a good deal of study prior to that time to the canal question, I came to the conclusion, in 1878, that a free canal was essential to the business interests of this great metropolis, and accordingly I introduced a measure into the Legislature, which received but little favor at the time and was defeated ignominiously. I introduced it again the following year and never lost sight of it, and I have the satisfaction now of knowing that, having conceived this bill—myself writing the amendments to the Constitution—and pressing it for four years, I have the satisfaction now of seeing the two political parties, Republican and Democratic, each putting a plank in the platform of its party, each trying to get the best of the situation and striving and recommending to the people a free canal policy; and I have the pleasure of knowing that my own conception has passed both branches of the Legislature without a dissenting vote; and I have the satisfaction of knowing that I have not only accomplished a purpose, but have created a State policy. The next stage will be—and that will come while many of us are

still living—a ship canal between Buffalo, Albany and New York. That will be the fourth and last stage, but the longer we live the more prosperous we shall see our water-ways become, and if no one else will do it I will volunteer myself to do as I did with the free canal policy; I will go to the front for the ship canal policy. Now we have here a matter that I can entertain you with—if I can entertain you at all—and that is the Welland canal. When we built the Erie canal we made a great mistake that we did not enter Lake Ontario with another canal connecting that lake with Lake Erie. The Canadians have the best of us, as they will, when it is completed, have a canal which will admit thirty feet of water, which is one hundred and ten feet wide, and which will let in vessels of two thousand tons, laden with grain at Chicago, and without any transshipment of its freight, carry it over the watery highways of the world to London, to Liverpool, or anywhere else. We have in that a great rivalry.

I have said that our State is an artificial State. New York city is a purely artificial city, on an island by the sea. She has no back country, she has nothing to support herself and she is as artificial as was Venice, the city of a hundred islands. She has scarcely in history a parallel as artificial in all that we know of ancient or modern times—a simple city upon an island. And whence does she draw her wealth? It is from that vast area of the West, which, as I have told you, embraces 92,400 square miles, which you enter by the Erie canal. Passing on the west side of the Alleghanies, now you strike Pittsburg. Follow along the valley of the Ohio and you reach its junction with the Mississippi proper, and down that we pass to the entrance of this Father of Waters into the Gulf of Mexico. Now, here has been a cunning man at work trying to destroy our business. He has built jetties at the mouth of the Mississippi river, and by the scouring process of the flow of water that has pressed through these low and malarial banks he has scoured out a depth of thirty feet, and the largest ships of the world can now find entrance into New Orleans; and we find a very large portion of the drainage of that great valley going down the river now, by reason of inventions that have been made that will protect the grain grown in the sub-arctic regions of Minnesota and Wisconsin from molding—which could not be done until within a few years—when brought into the semi-

tropical region of New Orleans, where it can be shipped. And thus we find the natural drainage of the Mississippi river going little by little away from us and our artificial drainage. It is steadily leaving us, and at the same time strenuous efforts to take away our trade are being made by the Canadians, through the St. Lawrence river. I will not cite the figures, but the commerce of Montreal in the drainage of the great West has trebled within the last four years. It therefore becomes us to be careful in the encouragement that we give to the transportation interests of the West, and here it becomes us as a State to take under our care more than we have hitherto done the railway interests which, mistaking their calling, would wipe out the Erie canal, and by wiping it out throw the traffic into Pennsylvania, which can transport by rail cheaper than we can; and with that end in view, using what little public experience I have had, I have brought forward in the Assembly, but which unfortunately was defeated in the Senate, a bill providing for what I believe every man in this audience will agree with me has come to be a necessary business of the State with regard to its transportation interests—that is to say, the creation of a Railway Commission to superintend these roads. I think I may say that all the evil that was done by the false system would be rectified by this commission; and I think I was the first to suggest the remedy, which has met with much opposition; but I may say the president of the Erie Railway, Mr. Jewett, has given his cordial and hearty approval to the plan for a Commission to supervise such an important interest and stand between the interests of the companies and the interests of the State. We have given these companies too much, and no one can look at any railroad in the State without beholding a corporation that is, substantially, at least, irresponsible to the State that gave its franchise. I mention these facts only because they are vital to us here. If New York were beside a great river, as St. Louis is, it could take care of itself; but we must take care of New York. I have pointed out to you the great railroad system of our State. The system extends westward, and, strange to say, the westward transportation, which has given our system its value and its advantages, is across the natural system of drainage and contrary to the known rules of the movement of commerce. There is only one instance parallel to it in the history of

commerce, and if you will permit me I will use it as an illustration. This we find in the valley of the Euphrates in Asia, and in ancient times. There was precisely the same artificial course of transportation there that we find in use in our own time in our communication with the West. We cross the Mississippi Valley and draw by rail at right angles to it the products that would naturally go down that great waterway and its tributaries. Just so in olden times the products of Asia were carried across the water-sheds. The drainage of the valley of the Volga, which flowed into the Caspian sea and the Sea of Aral, were carried westward through Mesopotamia and across the valleys of the Euphrates and the Tigris, building up the great cities of Nineveh, Bagdad, Babylon and Damascus, and finally reached the sea at Sidon, Tyre or Byzantium, which subsequently became a great Roman city; and thence they were distributed by merchants through the ports of the Mediterranean. This built up Carthage and the vast system of cities that extended along the northern shores of Africa. In the course of time, these, as you know, fell, first into the hands of the Greeks and then of Rome, which was mistress of the world—how small a portion of it, she did not know. When vast hordes of barbarians left her proud palaces a waste of smouldering ruins, there grew out of that a new world; but darkness reigned over the commerce of the world for a long period of time. I come back now to the crossing of this system of transportation. I need not call your attention to the wealth and splendor of Babylon; I need only call your attention, as we are talking of commerce, to the fact that the fall of Babylon was not due to her luxury or her splendor; it was not the baseness to which her government was reduced which caused her fall; she fell into decay simply because the cunning Arabian merchants, crawling round the Persian gulf, carried the products which came by the Volga and the Caspian sea down through the Persian gulf, through the Arabian sea and the Red sea to Suez, whence it was carried across the isthmus to the Mediterranean. The caravan routes fell into disuse, those mighty cities declined, and the whole of Mesopotamia became in consequence a waste and wilderness, and the Alexandrian ports in the time of Cleopatra grew into magnificence and outshone the splendor of Babylon. Why? Because the wheat and corn and the products

of Egypt and India passed through her hands and paid toll to her. Finally, the Greek merchants got possession of the traffic, and then the Venetian merchants, revelling in their wealth and glory, founded there in the Mediterranean on the Hundred Islands, the most wealthy mercantile community that has existed in modern times. I am simply tracing now the water-ways of the world, and I use this as an illustration, "to point a moral and adorn a tale." Venice, the richest city of any time, next to Babylon—Venice fell during the Crusades. And why? There was one way only to break the back of the Saracen, and that was to cut off the great commercial interests that were pouring in by the Isthmus of Suez; and Pope Nicholas XII. in 1294 issued to all the crowned heads in Europe a letter asking, but not commanding, that they should recommend to their subjects that they should cease traffic with the Saracen, and the Asiatic trade in the latter part of the 13th century was cut off, and darkness worse than polar night weighed down the mind for centuries. But Venice, which up to that time had controlled the commerce of the Mediterranean, sought a way round Africa to reach India. In this she failed, but in the progress of this enterprise there sprung up in Portugal a prince who founded his observatory at Cape St. Vincent and invited the wise men of the world to come there and receive instruction, and among them were Vasco de Gama, a noble representative of Portugal, and Columbus of Genoa. The latter conceived that he could reach Asia, the land of untold riches, by sailing west a distance of 4,500 miles, and so sure was he that he had attained the goal of his hopes, that on his second voyage he required an affidavit from all persons on board his fleet that they believed the coast of Cuba, along which they had sailed, was the coast of Asia. His own belief needed no confirmation, for he was sure Hispaniola was the real Ophir from whose rivers Solomon had once obtained his gold, and that the extremity of Cuba was the southern cape of Asia, by doubling which he could sail along the known coasts of India to the Red sea, and from thence return by land to Spain, thus completing the circuit of the globe. Even to the day of his death he never knew he had discovered a new continent, the existence of which was not demonstrated till after the conquest of Mexico, when Bilboa, September 25, 1513, from a mountain summit on the Isthmus of Panama, descried the Pacific ocean, separating America from Asia.

I mention these historical facts simply to draw attention to the value of the watery highways and to impress upon you the necessity of their enlargement within our own State; for it is the watery highways of the State—the Hudson river, which breaks over the Alleghany range, and the Mohawk, which breaks again through the upper portion of that range—that gives us our prosperity, and against all natural reason the drainage of the valley of the Mississippi; and that drainage extends, by these artificial lines, 4,000 miles above the mouth of the Mississippi itself to the very base of the Rocky mountains, to the wildest passes, even whence at the present time are brought products which find their way through the canal to the ocean, and are distributed through the waters of the ocean to all parts of the world. I say that we should encourage this and we should not lose sight of it. It has been my purpose here to-night to call your serious attention to the matter, and to ask you not to forget it when it shall come before you either in legislative action, or proposed action, or through anything that may happen to call public attention to this matter.

And in this I come down to our own city, which I have said was an artificial city, a city on an island by the sea. And here I would speak a word with our merchants. They are largely interested and concerned in the welfare of this great city, a city destined in time to be the largest in the world; a city which substantially holds in its population Jersey and Brooklyn as parts of New York. Round our matchless harbor we have more than 2,000,000 of souls. I would find fault with the merchants for this, that they are sometimes a little wanting in public spirit. You may go to Liverpool or London and place your ship in dock there and give your cargo into the keeping of a consignee; and if you are under orders to go to Europe, to Australia, to Cape Colony, or any other part of the world, there are warehouses on the other side of the dock in which your ship is floating from which you may obtain any possible cargo you may want in eight-and-forty hours. You go down along the North river and what do you behold there! Not a line of bulkheads of stone, where no docks at all are required, but simply bulkheads of cribwork, or anything at all that will allow a ship to lie inside, meeting the eye of the shipper with disgust and the eye of the taxpayer with something that takes some more strong expression than simple dis-

gust. We have no need for docks, because we have no tide like Liverpool, where it rises 14 or 15 feet. The rents are too high, our harbor dues are too great in many cases, our pilot charges are too great, our dues for quarantine are too great. With all due respect, I must say that everything that man could desire to drive commerce away from the port of New York is done by merchants, or at least by the laws of the State of New York, against which the merchants do not protest. We should do everything in this great city to encourage commerce, not to drive it away. They are wiser in Philadelphia and Boston and Baltimore than here. Many vessels come here, discharge their cargoes and go away as far as Baltimore in ballast to get a cargo to carry to some other part of the world. Why? Because they are afraid of our high charges here. I have spoken of the docks—of the immense amount of money that is squandered for no purpose whatever, and yet we have not dockage for the ships that come to beg the poor privilege of giving us the benefit of their trade. Go along West Street and look on your right, and what do you find there? Miserable little horse railroads monopolizing the seat of commerce, instead of the steam railroad that Boston has built, connecting her Long wharf and her Indian wharf! And what do you see on the left-hand side as you go along? Petty stores, where second-hand goods are sold, and numerous small gin-mills! Is there a single first-class store there? Where are the warehouses that should line the street? Can any ship at Pier 41, Pier 28, pier anything on the North river, look around her and find a cargo? She must hunt all over the city if she wants an assorted cargo of goods. I say the ships of the world that send their goods here to New York do it every time under pressure. If they could go anywhere else they would not come here.

There is among the New York merchants a lack of public spirit which is exhibited in sometimes expending their care on trivial matters which should be devoted to affairs of much greater importance. I think we have too little pride in our institutions. There is no city in the world that has so many beneficent institutions. Look around and see, for instance, the asylums for juvenile delinquents and the care bestowed upon them. You may take the Reformatory under the care of Protestant denominations, or you may

take the Catholic Protectory as illustrative of our public spirit in all that relates to the humanities of life; but in that which concerns our public business it looks very much as if our motto was "every man for himself and the old boy take the hindmost." This lack of public spirit is detrimental to the growth of the city, but the city grows notwithstanding. It is the healthiest city in the world. The death rate is only 29 in a 1,000 to 32 in Philadelphia and Boston, and 29 to 41 in the town of Dayton, Ohio, in which I have lived. Why is this? It is because we are situated upon an island. We have the sea breezes continually, and, despite our bad management, we have commerce from every quarter of the world. All we want to do is to give it welcome, that welcome which we neglect to give to the health-giving breeze that gives us life. We neglect the commerce of the world that is so ready to pour itself into our lap. I have given a good deal of care and study to this subject, and I think I may say, without boasting, that during the period of my public life I have done many things for its benefit. I will point out one. I pressed the measure to free the canal, against all the combined influences, political and commercial. I have brought forward and seen pass a measure which will allow every railroad in the United States to come into this city, although it was bitterly opposed by the only railroad which had that privilege; I refer to the New York Tunnel. That will be a success not only as a tunnel, but a success which will realize great results in the commerce of this city, and instead of the Erie Railway building its great elevators for the trans-shipment of grain, they will be built here upon our island, giving us the wealth, prosperity and importance that attaches thereto. The future glory and prosperity of our city are not to be lost sight of by any of us. Its past is a record of splendor and patriotic devotion at all times to the State and to the nation. It has given at all times its soldiers and sailors for the defense of the country, and during the late war, without regard to public feeling or affiliation, all, whether, like me, born of German parents, Englishmen, Irishmen or Scotchmen, came forward as promptly as the native-born citizens of New York. It behoves them all, then, I say, to look forward to the prosperity and the growth of the city, to the one thing alone which has made the city great and will continue

to sustain its prosperity, which is its commerce. New York is a commercial city, and when it ceases to be a commercial city it is nothing. A metropolis by the sea, it is one of the great cities and financial centres of the world to-day, and will be, with proper encouragement, the great financial centre of this New World.

Dr. Hayes having died about the time when this lecture was written out from the reporter's notes, it was never revised by him, though some palpable errors have been corrected by a friend.